DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114.

   Applicant's submission filed on 8/18/2009 has been entered. Claims 2-3, 5 and 7 are cancelled; and claim 1 is amended. Accordingly, claims 1, 4, 6 and 8-11 are currently pending in the application.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

3. Claims 1, 4, 6, 8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US 6, 472, 019 B1) in view of Di Giaimo (US 3, 496, 134).

   Yamaguchi et al disclose a treated textile involving the step of applying treatment liquid, wherein the treatment liquid contains a water- and oil-repelling agent (abstract). The water and oil-repelling agent is generally a fluorine containing compound. The fluorine containing compound is a fluorine containing polymer. The fluorine containing polymer may be a polymer comprising a repeat unit derived from a fluoroalkyl group containing monomer such as fluoroalkyl group containing (meth)acrylate (column 2, lines

22). The fluorine containing polymer may be a copolymer comprising (A-I) a repeat unit derived from a monomer having a fluoroalkyl group, (A-II) a repeat unit derived from vinyl chloride and/or vinylidene chloride and (A-III) a repeat unit derived from a fluorine free monomer (column 7, lines 25-33). Various emulsifying agents such as nonionic emulsifying agent can be used (column 9, lines 43-46).

Yamaguchi et al is silent with respect to use of a combination of at least one epoxy compound selected from epoxidized vegetable oil or epoxidized fatty acid ester, and at least one weakly basic compound as hydrochloric acid-trapping compound.

However, Di Giaimo teaches that the well recognized sensitivity of polyvinyl chloride i.e. halogen containing polymers to light and heat is dealt with by the addition of heat or light stabilizers. Conventional heat stabilizers are sodium carbonate, barium stearate which reads on the metal salt of an acid of present claims and an organic epoxy hydrochlorophyl (column 1, lines 39-43, lines 49-50) such as epoxidized soybean oil (column 3, line 1-2). Heat or light stabilizers read on the hydrochloric acid-trapping compound of present claims. Further, court held that it is prima facie obvious to combine two ingredients, each of which is targeted by the prior art to be useful for the same purpose. See *In re Lindner* 457 F.2d 506,509, 173 USPQ 356, 359 (CCPA 1972). Therefore, in light of the teachings in DiGiaimo and case law, it would have been obvious to one skilled in art at the time invention was made to add a combination of heat or light stabilizers of Di Giaimo to halogen containing polymers of Yamaguchi et al to prevent degradation owing to sensitivity of halogen containing monomers to light.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi et al (US 6, 472, 019 B1) in view of Di Giaimo (US 3, 496, 134) in view of Snyder (US 3, 617, 188).

The discussion with respect to Yamaguchi et al in view of Di Giaimo in paragraph 3 above is incorporated herein by reference.

Yamaguchi et al is silent with respect to three different nonionic surfactants.

However, Snyder teaches a mineral oil composition in conjunction with other compositions such as those which impart permanent press and water-repellency characteristics to a textile material (abstract). The selection of a suitable emulsifying agent for forming the emulsion concentrate is dependent on the method by which the mineral oil is applied to the textile material. In general preferred emulsifiers are nonionic. It has been found that the desired stability can be achieved by using a blend of different nonionic emulsifiers. Therefore, in the light of the teachings in Snyder, it would have been obvious to use a blend of three different nonionic emulsifiers to obtain the desired stability.

Response to Arguments

5. Applicant's arguments, filed 8/18/2009, have been fully considered but they are not persuasive. Specifically, applicant argues that (A) 37 CFR 1.132 Declaration submitted demonstrates that use of a combination of epoxy compound and at least one weakly basic compound as HCl trapping compound provides for superior properties; and (B) inventive examples 1-10 and the test results as set forth in Table 1 at page 9 of Mr.

Enomoto's Declaration are representative of the scope of present claims and thus commensurate with showing of unexpected results.

With respect to (A), as stated earlier and reiterated here, it is noted at the outset that HCl trapping compound is used to trap HCl produced by chloride containing monomer in the copolymer of present claims, and properties exhibited by the aqueous dispersions are thus dependent on the chloride content present in the chloride containing monomer. Given that, examiner's comments are directed to those dispersions containing the same chloride containing monomer in similar amounts in both inventive and comparative examples. For the sake of convenience, data from declaration which meets these criteria is presented below -

Component	IE1	IE2	IE5	IE6	IE8	CE4	CE5	CE6	CE7
FA	150 g	150 g	150 g	150 g	150 g	150 g	150 g	150 g	150 g
Vinyl Chloride	40 g	40 g	40 g	40 g	40 g	40 g	40 g	40 g	40 g
Non-ionic emulsifier	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Epoxidized soybean oil	10 g	10 g	10 g	10 g	10 g	10 g	10 g	10.7 g	0 g
Sodium hydrogen carbonate / Sodium Carbonate	0.7 g	0.7 g	1.5 g	0.7 g	0.9 g	0.7 g	0.7 g	0 g	10.7 g
H_2O repellency (Initial)	5	5	5	5	4	5	5	5	4
Oil repellency (Initial)	5	4	4	4	3	5	5	5	3
H2O repellency (1 month at 50°C)	5	5	5	5	4	4	4	4	4
Oil repellency (1 month at 50°C)	4	4	4	4	3	3	3	3	3
Storage stability	Good	Good	Good	Good	Good	Good	Good	Good	Good
Mechanical Stability	Good	Good	Good	Good	Good	Fair	Fair	Fair	Poor
Chemical Stability	Good	Good	Good	Good	Fair	Fair	Fair	Fair	Poor
Yellowing	Good	Good	Good	Good	Good	Good	Good	Good	Good

As can be seen from the data, comparative examples 4-6 exhibit similar storage stability, chemical stability, yellowing, water and oil repellency after one month at 50^0C; better initial oil and water repellency; while exhibiting only a slightly poor mechanical stability. Thus, it is clear from the data submitted that comparative examples 4-6 exhibit superior

properties on more counts than at least the inventive example 8. Therefore, applicant's argument that use of a combination of epoxy compound and at least one weakly basic compound provides for superior properties is not persuasive.

With respect to (B), examples showing supposedly superior properties are presented only for dispersions meeting the following criteria - monomers are used in amounts that fall within the broadly disclosed range of 50 to 80% by weight of perfluoroalkyl or perfluoroalkenyl (meth)acrylates wherein the carbon number of perfluoroalkyl or perfluoroalkenyl groups is 2 to 14; 5 to 30% by weight of chlorine containing monomers such as vinyl chloride, vinylidene chloride and α-chloro acrylate; and 5 to 30% by weight of other copolymerizable monomers. In addition, the only epoxidized compounds taught in these examples is epoxidized linseed oil and epoxidized soybean oil; while the only metal salt of an acid is sodium hydrogen carbonate and sodium carbonate. Thus, it is the examiner's position that data submitted is not commensurate with scope of present claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KARUNA P. REDDY whose telephone number is (571)272-6566. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/K. P. R./
Examiner, Art Unit 1796

/Vasu Jagannathan/
Supervisory Patent Examiner, Art Unit 1796